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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/719,375

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EXAMINER

ANDERSON, REBECCA L

ART UNIT

PAPER NUMBER

1626

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/719,375	<b>Applicant(s)</b> DAKKA ET AL.	
	<b>Examiner</b> REBECCA L. ANDERSON	<b>Art Unit</b> 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 40 and 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-39 is/are rejected.
- 7) ☒ Claim(s) 1-9, 13-39 and 42-48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 1-48 are currently pending in the instant application. Claims 1-9 and 13-39 are rejected. Claims 10-12, 40 and 41 are withdrawn from consideration as being for non-elected subject matter. Claims 1-9, 13-39 and 42-48 are objected.

### ***Election/Restrictions***

Applicant's election with traverse of Group I and the further election of epoxyoctane in the reply filed on 23 January 2009 is acknowledged. The traversal is on the ground(s) that all groups require supercritical carbon dioxide and therefore have unity of invention and that there is no undue burden. This is not found persuasive because the technical feature corresponding to the claims is the product formed which differs as can be seen from Groups I-VI wherein epoxides, aldehydes, ketones, acids and alcohols are formed. Therefore claims 1-25 are not so linked as to form a single general inventive concept and there is a lack of unity of invention because they lack a special technical feature. Accordingly, unity of invention is considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper. Additionally, in regards to the lack of burdensome search, the inventions are independent and distinct because there is no patentable co-action between the groups and a reference anticipating one member will not render another obvious. Each group is directed to art recognized divergent subject matter which require different searching strategies for each group. Moreover, the examiner must perform a commercial database search on the subject matter of each group in addition to a paper search, which is quite burdensome to the examiner.

As per MPEP 803.02, the examiner will determine whether the entire scope of the claims is patentable. Applicants' elected species is not allowable. Therefore, according to MPEP 803.02:

Following election, the Markush-type claim will be examined fully with respect to the elected species and further to the extent necessary to determine patentability. If the Markush-type claim is not allowable \*\*, the provisional election will be given effect and examination will be limited to the Markush-type claim and claims to the elected species, with claims drawn to species patentably distinct from the elected species held withdrawn from further consideration.  
the elected species shall be rejected, and claims to the nonelected species will be held withdrawn from further consideration.

As the elected species has been found not allowable, the Markush-type claims have been rejected and claims to the nonelected invention held withdrawn from further consideration.

**Claims 1-9, 13-39 and 42-48 have been examined to the extent that they are readable on the elected embodiment, the process of preparing epoxyoctane.**

Since the elected species is not allowable, subject matter not embraced by the elected embodiment is therefore withdrawn from further consideration. It has been determined that the entire scope claimed is not patentable.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

Claims 1-9, 13-39 and 42-48 are objected to as containing non-elected subject matter. Claims 1-9, 13-39 and 42-48 presented drawn solely to the elected embodiment would overcome this objection.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7, 9, 13, 14, 18-33 and 36-39 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the process of preparing epoxyoctane with a solvent containing carbon dioxide in at least 1% by weight of the solvent does not provide enablement for they weight of carbon dioxide in the solvent. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

As stated in the MPEP 2164.01 (a), "There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue."

In In re Wands, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have need described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

In the instant case,

***The nature of the Invention***

The nature of the invention is the process for preparing epoxyoctane.

***The state of the prior art and predictability or lack thereof in the art***

The state of the art is that There are a number of problems with the processes of the prior art. Conversions and selectivities for the various reactions are in general still low or require additional process modifications which incur additional costs. Frequently the catalyst systems utilized require special treatments and/or frequent regeneration in order to maintain catalyst activity.

***The amount of direction or guidance present and the presence or absence of working examples***

The amount of direction or guidance present in the instant specification is that carbon dioxide when present should be at least 1% by weight of the solvent mixture (see page 11-12)

***The breadth of the claims***

The breadth of the claims is the process for preparing epoxyoctane with any amount of carbon dioxide present.

***The quantity of experimentation needed and the level of the skill in the art***

The quantity of experimentation is undue. One would have to determine what reaction conditions are required to prepare epoxyoctane with less than 1% by weight of carbon dioxide. While the level of skill in the art is high, the lack of support in the instant specification and claims to prepare the epoxyoctane with less than 1% by weight of carbon dioxide necessitates the requirement of undue experimentation to determine what reaction conditions would be needed.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-9, 13-17, 19-27, 30-35 and 37-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims refer to a group IVB, VB, or VIB metal. However, this statement renders the claim indefinite because the reference to the periodic table does not distinctly claim the elements that the applicant is trying claim. Applicant is reminded that a claim must stand alone to define the invention, and incorporation into the claim by reference to the specification or an external source is not permitted (Ex parte Fressola, 27 USPQ 2d 1608, BdPatApp & Inter. (1993)). Therefore, the claims are considered indefinite due to the incorporation of groups from the periodic table. This rejection can be overcome by specifically listing the elements, which applicant considers part of the invention, into the claim.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rebecca L. Anderson whose telephone number is (571) 272-0696. Mrs. Anderson can normally be reached Monday through Friday from 6:00am until 2:30pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Joseph K. McKane, can be reached at (571) 272-0699.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*/Rebecca Anderson/  
Primary Examiner, AU 1626*

7 April 2009

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Rebecca Anderson  
Primary Examiner  
Art Unit 1626, Group 1620  
Technology Center 1600